ER-2 Flight Summary

Mission: Mission 1
Flight Scientists: S. Platnick, P. Newman

Sortie: 02-946
Date: Wednesday, 3 July 2002
Pilot: K. Broda

Takeoff: 1035 EDT (1435 UTC)
Landing: 1635 EDT (2035 UTC)
Duration: 6:00

Objectives:

Repeated straight flight line over the western and eastern ground sites extending out over the Gulf (pt. A) and Atlantic (pt. B). Approximately 2-1/2 round trips were made. At 1813 UTC, the ER-2 headed south (pt C) for a south-to-north track, paralleling the Aqua track (1834 UTC overpass) over the eastern ground site. The ER-2 was then directed toward the southwest under direction from NPOL, where relatively short (5-6 minute) legs were flown. The ER-2 then proceeded off the Atlantic (southeast of Miami) followed by return to Key West.

Note: The Aqua spacecraft was transitioned from "safe mode" on Monday 1 July. As of 2000 UTC, July 3, the MODIS cold focal plane (Shortwave IR bands, including 1.6 and 2.1 μm band) was 3 K above the nominal operating temperature.

Western ground site:
PARSL, Everglades National Park, Gulf Coast Visitor's Center
25 50.0 N, 81 23.4 W (25.83, -81.39)

Eastern ground site:
Kendall-Tamiami Airport
25 39.3 N, 80 25.9 W (25.66, -80.43)

Aircraft coordination:

Nominal take off times (local): WB-57 (1200), Proteus (1015), Citation (1300), Twin Otter (0800 + 2nd flight), P-3 (down day).

WB-57: In situ sampling in regions of opportunity along the east-west flight line, and do a spiral profile near the eastern ground site at the time of the Aqua/ER-2 coordination.

Proteus: Fly along the ER-2 east-west track. At about 1800 UTC, will be over the anticipated clear-sky western site/panhandle heading east to rendezvous with Aqua/ER-2.

Coincident ER-2/Proteus times as noted by the Proteus pilots were at: 1533, 1606, 1638, 1712, 1744, 1753 UTC.

Summary/highlights:

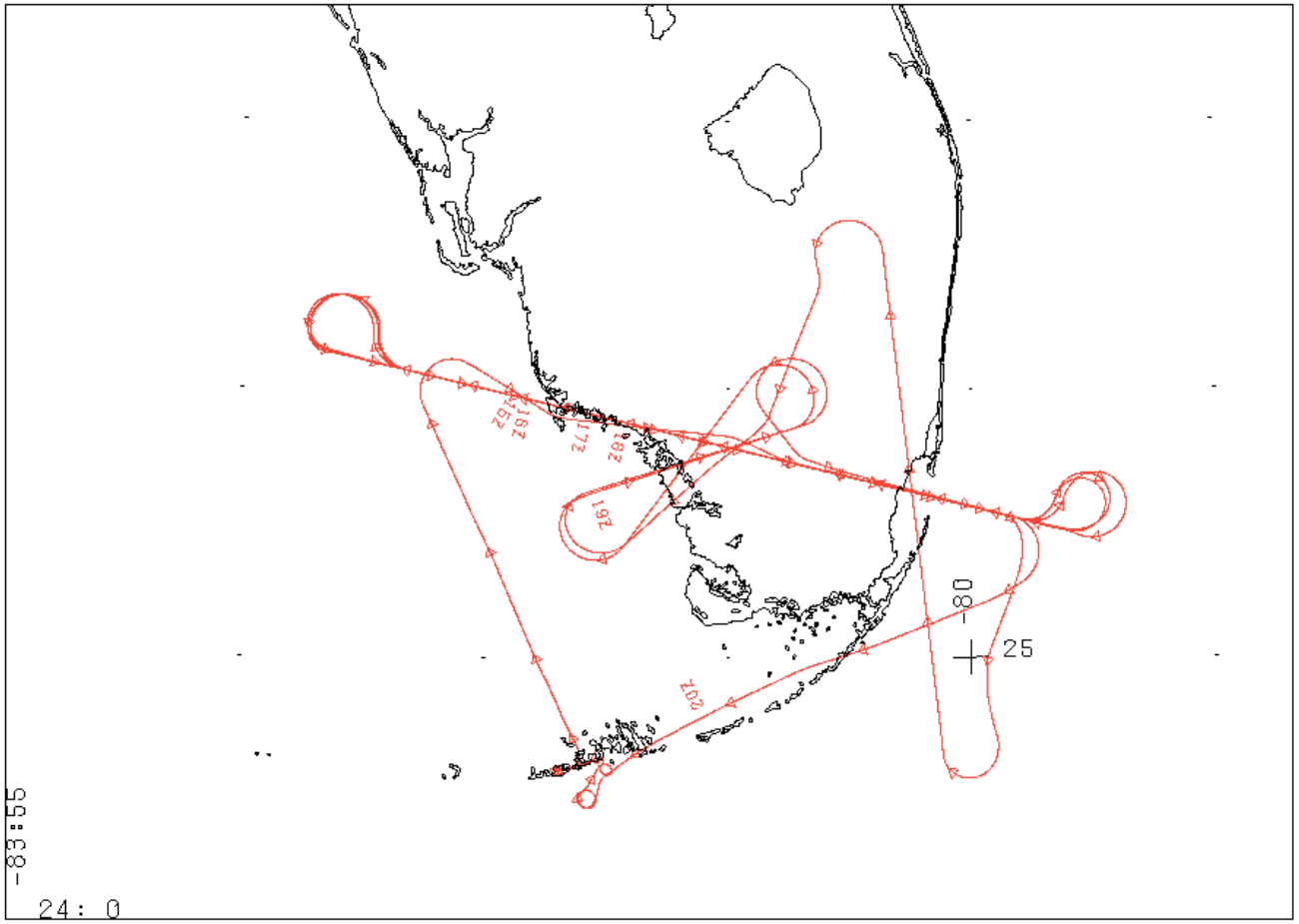
• Variety of cloud types/fields throughout the day. Some clear sky or thin cirrus regions, especially over the Gulf and southern portions of the Atlantic tracks. Coordination with Aqua.

• Dropsondes: Gulf (pt. A, 1652 UTC), Atlantic (pt. B, 1723 UTC), Atlantic (pt. C, 1822 UTC)

ER-2 science instrument payload and status:

Instrument	Status	Notes
CoSSIR Conical Scanning Sub-mm wave Imaging Radiometer	**P**	**Problem with 487 Ghz sensor, otherwise worked well**
CPL Cloud Physics Lidar	**G**	
CRS Cloud Radar System	**G**	
EDOP ER-2 Doppler Radar	**G**	
JLH JPL Laser Hygrometer	**F**	**Failed to take data**
MAS MODIS Airborne Simulator	**G**	**11 μm channel had intermittent coherent noise, otherwise worked well**
MMS Meteor. Meas. System	**G**	
MTP Microwave Temperature Profiler	**G**	
RAMS Radiation Meas. System	**G**	
SSFR Solar Spectral Flux Radiometer	**G**	
Vaisala Dropsonde	**G**	**3 sondes**

G = good; P = partial data collected; F = failure, no data



FLIGHT 02-946 3 JULY 2002 A/C 809 CRYSTAL/FACE
LAMBERT CONFORMAL PROJECTION: SP1 = 24.1 SP2 = 26.3 CM = -81.0 ROTATED BY 0.0
14:30:00 TO 20:25:00 UT SCALE 1:2.20E+06 TIME TICK EVERY 5.00 MINUTES